

MAR 13 2008

Appl. No. 10/519,107

Reply to Office Action of October 17, 20007

REMARKS/ARGUMENTSSpecification

The specification is amended to correct spelling and clerical errors noted by the Examiner. Withdrawal of the formal objection is requested.

Prior art rejections

A. The Examiner's rejection of claims based on Adachi and Ueda relies on Wieczorek as evidence of the obviousness to modify compounds. Wieczorek is similarly relied on with respect to a rejection based on D'Andrade and Ueda.

It is submitted that Wieczorek et al. is non-analogous art, with different considerations as explained below, and therefore does not provide evidence with respect to considerations to be added to the combination of Adachi (6,458,575) and Ueda (JP2001-160488) or the combination of D'Andrade and Ueda.

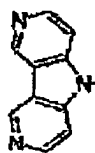
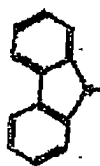
The art field of Wieczorek et al. is Medicines. This is not analogous to the electroluminescence field.

In the art field of medicines, the shape or the structure of a compound is important when considering a key and a key hole model etc. in

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the work of an enzyme. So, it may be understood that Carbazoles are analogous to Azacarbazoles for the field of medicine in Wieczorek.



Carbazole group

Azacarbazole group

On the other hand, in the art field of electroluminescent materials, the physical properties and spectroscopic properties of a compound are more important than the shape. It is these properties that control practical utility.

It is submitted that, the triplet state energy and the electric potential of the compound in the present invention shown on the right side of page 6 in the rejection are not analogous values from those of CBP shown on Page 4 of the rejection. It is very difficult to guess the physical properties and spectroscopic properties by seeing only the

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structure of a compound in this art field.

Further, in the art field of synthesizing, as the Examiner pointed out on page 5 of the rejection, there may be a few compounds in the present invention which can be synthesized by the same reaction as that of carbazole compounds. However, it is well-known that if one atom in the skeleton of a compound is different (ex. benzene and pyridine), it is necessary to change the reaction system for synthesizing most compounds. Actually, the synthesizing method of Compound 143 of the present invention is special. Compound 143 could not be synthesized by usual method for carbazole compounds. The difference of one atom may seem small for a casual viewer, but it is big difference for a person skilled in the art of synthesizing organic compounds.

An unexpected and an highly advantageous result of the present invention comparing CBP (page 132) are shown in the present specification. See tables on Page 134, 140, 142, 144 and 146.

B. The Examiner also rejects claims based on D'Andrade in view of Ueda with evidence supplied by Thelakkat. However, applicants respectfully submit that the teaching in Thelakkat is not applicable to the combination of D'Andrade and Ueda.

Thelakkat discloses compounds which in the present art, are much different from the other art than a casual inspection of the

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formulas would reveal. Thelakkat concerns compounds using nitrogen/oxygen containing  $\pi$ -electron deficient heterocyclics as electron transport/hole-blocking materials as shown in Figure 2 on page 431. Each of them has one ring or two condensed rings, not three condensed rings such as Formula (I) of the present invention or Ueda's compounds. Therefore they are not analogous and not obvious in the structures.

If the main structure of the compound structure is different, the  $\pi$ -electron state is different. For example, it is well known that carbazoles are  $\pi$ -electron rich compound though having nitrogen atom in the structure.

It is therefore it is not obvious or logical to apply Thelakkat teaching to Ueda's compounds which are non-obvious structure from Thelakkat's compounds.

As noted above, it is very difficult to guess the electroluminescent properties by inspection only of the structure of a compound. It is therefore submitted that the rejection applies hindsight of the type that is not permissible. One of ordinary skill in the art would not consider Thelakkat relevant as required by the Examiner's combination of art. It is therefore submitted that the invention as claimed is not shown or suggested by the combination of

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the art.

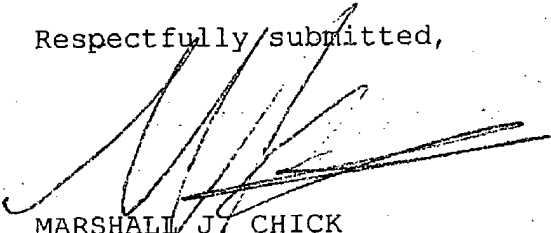
Provisional Double patenting rejection

USSN 11/632758, USSN 10/946499 and the present application are common ownership. However, because the present application has the earliest date, it would be premature to file a Terminal Disclaimer. If the only rejection of record is the double-patenting rejection, it should be withdrawn under current patent practice.

In view of the above, the rejections are avoided. Allowance of the application is therefore respectfully requested.

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Respectfully submitted,



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Enc. Petition for One Month Extension of Time  
Form PTO-2038 - \$120